MultiPoint
A Rhein Tech EMC Regulatory Update

March 2006

**EMC Regulatory Update**

**Dear Colleague,**
We have provided typical questions and answers that represent in most cases technical opinions with justification in FCC and CE requirements. The particulars of the product for certification must be considered with respect to the applicability of these questions and answers. We hope you find our update valuable and welcome your feedback if you have any special needs or questions. Call at 703-689-0368 or view archived issues of MultiPoint at our web site.

## FCC Rules for DECT Devices

**QUESTION:** Our firm manufactures a Digital Enhanced Cordless Telephone (DECT) product. Presently, the telephone is used in South America in the 1910 to 1930 MHz band and we are planning to introduce it to the US market this summer. Do you have any information about the FCC's rules, regulations, and test procedures?

**ANSWER:** The device must comply with the new Unlicensed Personal Communications Service (UPCS) rules in FCC Part 15, Subpart D. TCB's can approve DECT products if they are accredited to American National Standard Institute's (ANSI) Scope A3 and if the device is not on the FCC's exclusion list. Furthermore, the Sixth Report and Order, Third Memorandum Opinion and Order and Fifth Memorandum Opinion and Order explains the adoption of new rules for operation in the UPCS band. The FCC modified some of the operating parameters of the band to allow standards such as DECT to utilize the band, however, the documentation and the rules are not always in synch. The following link provides the FCC's ruling on additional flexibility in the 1920-1930 MHz UPCS frequency band. (see Section D, Additional Flexibility in the 1920-1930 MHz Band, paragraph 77 - 81)

click here for link

## FCC DoC vs. FCC Certification

**QUESTION:** We have a wireless mini-PCI card to be FCC Certified or Declaration of Conformity (DoC) issued as a PC peripheral device. The device connects externally (i.e. like a PCMCIA card or USB cable) or when it installs internally, it connects to the antenna by a cable. Will the FCC allow certification of this device as a PC peripheral device?

**ANSWER:** Even though a wireless mini-PCI card does not appear to meet the strict definition of a PC peripheral device (per FCC Part 15.3), the FCC would allow a mini-PCI card transmitter used with a Class B computer to be considered a computer peripheral subject to either Certification or DoC.

## FCC Testing Requirements for Early Production Units

**QUESTION:** We are testing a GSM phone which is capable of both GPRS Class 10 and GPRS Class 12 data transmission. In one case, the GPRS data transmission mode uses 2 of 8 GSM timeslots and in the other case it uses 4 of 8 GSM timeslots. This phone is an early production phone with typical immature software and there are problems forcing the phone into a 4 of 8 configuration for testing. We would like to know if it is allowable to double-up the 2 of 8 timeslots SAR test results to show compliance in the 4 of 8 timeslots SAR test results GPRS configuration.

**ANSWER:** The FCC would not think that early production phones with typical immature software and problems forcing the phone to operate in a 4 of 8 slot configuration for testing SAR in GPRS mode would satisfy the requirements of 47 CFR 2.907 on "Certification" and 47 CFR 2.908 on "Identical Defined". The rules and regulation under 47 CFR 2.907 (b) require units marketed to be identical (defined in Part 2.908) to the sample tested. Additionally, if the phone has immature software that does not allow it to operate in one of its normal operating modes, it would not be considered production ready.

Wireless phones are normally tested for SAR by establishing a call through an airlink between the Equipment Under Test (EUT) and a communication test set. The EUT is directed to operate at maximum output power according to device and network protocols under normal operating configurations; this means that internal software and hardware compensations within the EUT are used to automatically maintain the required operating conditions for the power step level, frequency offset, modulation quality, etc. It is unclear if forcing the device to operate in specific slot configurations would activate the same identical device functions (firmware & hardware) required for the EUT to operate in a designated GPRS Class during normal use conditions.

## Extending the FCC's Short Term Confidentiality

**QUESTION:** We would like to know if it is acceptable to the FCC if we request our TCB to automatically extend our application for the full 180 days under the FCC's Short Term (ST) confidentiality policy. We would be responsible to notify our TCB when the device is marketed so that the ST confidential information could be made to the public. We realize that ST confidentiality is typically allowed for 45 days with a further additional 45 day extensions for a total of 180 days. This is done by providing the FCC or TCB with a cover letter notification 7 days prior to the expiration of the 45 days ST confidentiality period.

**ANSWER:** We do not believe the FCC will find it acceptable to automatically extend all short term requests up to 180 days. If the product is going to be marketed after 180 days or more, then the grant should not be issued but rather be delayed until a more specific marketing date is projected. The FCC does not want to hold information, which should be provided to the public, as confidential beyond the product's marketing date. If products that require ST are given 180 days confidentiality, then the possibility increases that the product could get marketed without notification to the FCC. Determining and verifying when an applicant forgets to inform the FCC or TCB and exactly if and when a product has been placed in the market can be difficult and time consuming for the FCC and TCBs.

Furthermore, the information does not get released to the public properly by automatically extending the ST confidentiality period. The FCC sets the confidential period short (45 days) and leaves the burden on the applicant to extend it by providing a cover letter 7 days period to the expiration of the ST 45 day period. A summary of the FCC's ST confidentiality policy DA 04-1705 is stated below.

- Standard confidentiality policy used in the past by the FCC has not changed. Any standard confidentiality requests to hold proprietary information (such as schematics, technical block diagrams, technical operational descriptions, etc.) confidential for an indefinite time still

require the submittal of a cover letter requesting the confidentiality, a listing of the exhibits confidentiality is being requested for, and a justification for the confidentiality request

- Any Short-Term confidentiality requests to hold additional documents confidential for a limited time under the FCC's new policy must be done by submitting an additional cover letter requesting the short-term confidentiality, a listing of the exhibits short-term confidentiality is being requested for, and a justification for the reason(s) short-term confidentiality is being requested. Note that currently this confidentiality may only be requested for external photos, internal photos, test setup photos, block diagrams, schematics, user's manual, parts list, tune-up procedures, and operational descriptions.
- Note that any documents held under the ST confidentiality will automatically become public after 45 days. A manufacturer may extend this period up to an additional 45 days. This requires an additional cover letter requesting this extension must be submitted to the FCC or TCB a minimum of 7 days prior to the expiration of the original 45 day temporary grant of confidentiality.
- If the manufacturer engages in public marketing activities or otherwise publicizes the device prior to the expiration of the short-term confidentiality period, the applicant must immediately notify the FCC or TCB so the exhibits can be made publicly available.

See FCC link for additional information

# INTERNATIONAL UPDATE

## *EU: NEW CENELEC STANDARDS RELEASED THIS MONTH*

This is a shortened list of the CENELEC standards published during the past month:

- **EN 62040-2:2006** Uninterruptible power systems (UPS) -- Part 2: Electromagnetic compatibility (EMC) requirements
- **EN 60705:1999/A2:2006** Household microwave ovens - Methods for measuring performance
- **EN 61967-4:2002/A1:2006** Integrated circuits - Measurement of electromagnetic emissions, 150 kHz to 1 GHz -- Part 4: Measurement of conducted emissions - 1 ohm/150 ohm direct coupling method
- **EN 60060-3:2006** High voltage test techniques -- Part 3: Definitions and requirements for on-site tests
- **EN 60384-19:2006** Fixed capacitors for use in electronic equipment -- Part 19: Sectional specification - Fixed metallized polyethylene- terephthalate film dielectric surface mount d.c. capacitors

See www.cenelec.org for additional information.

## EU: RoHS DEADLINE IS CLOSER - EU ELECTRONICS MUST BE LEAD-FREE BY 7/1/2006

EU Directive 2002/95/EC specifies that new electrical and electronic equipment put on the EU market after July 1, 2006 cannot contain lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBB) or polybrominated diphenyl ethers (PBDE). Specifically, the lead free requirement will impact manufacturers currently using lead in soldering techniques. Electric, electronic, and mechanical components will need to be revised in order to withstand the higher temperatures during the new soldering processes which are needed when using lead-free solder. Effectively, manufacturers not only must use "unleaded" components but they also must use "upgraded" components. Additionally, the restrictions may also impact other electric and electronic equipment manufacturing procedures.

Click link for additional information

## *EU: NEW IEC STANDARDS RECENTLY RELEASED*

- **CISPR 13 (13 March 2006)** Sound and television broadcast receivers and associated equipment - Radio disturbance characteristics - Limits and methods of measurement
- **CISPR 16-1-1 (15 March 2006)** Specification for radio disturbance and immunity measuring apparatus and methods - Part 1- 1: Radio disturbance and immunity measuring apparatus - Measuring apparatus
- **IEC 60745-2-1 (23 February 2006)** Hand- held motor-operated electric tools - Safety - Part 2- 1: Particular requirements for drills and impact drills
- **IEC 61124 (15 March 2006)** Reliability testing - Compliance tests for constant failure rate and constant failure intensity
- **IEC 61347-2-8 (14 March 2006)** Lamp control gear - Part 2-8: Particular requirements for ballasts for fluorescent lamps
- **IEC 62132-4 (21 February 2006)** Integrated circuits - Measurement of electromagnetic immunity 150 kHz to 1 GHz - Part 4: Direct RF power injection method
- **IEC 62396-1 (8 March 2006)** Process management for avionics - Atmospheric radiation effects - Part 1: Accommodation of atmospheric radiation effects via single event effects within avionics electronic equipment
- **ISO/IEC 19790 (9 March 2006)** Information technology - Security techniques - Security requirements for cryptographic modules

See IEC for additional information.

## EU: NEW ETSI STANDARDS RELEASED THIS MONTH

- **ETSI EN 300 392-12-6 V1.3.1** February 2006 Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 12: Supplementary services stage 3; Sub-part 6: Call Authorized by Dispatcher (CAD)
- **ETSI EN 300 394-1 V2.4.1** February 2006: Terrestrial Trunked Radio (TETRA); Conformance testing specification; Part 1: Radio
- **ETSI EN 301 428 V1.3.1** February 2006: Satellite Earth Stations and Systems (SES); Harmonized EN for Very Small Aperture Terminal (VSAT); Transmit-only, transmit/receive or receive-only satellite earth stations operating in the 11/12/14 GHz frequency bands covering essential requirements under article 3.2 of the R&TTE directive
- **ETSI EN 301 040 V2.1.1** March 2006: Terrestrial Trunked Radio (TETRA); Security; Lawful Interception (LI) interface
- **ETSI EN 302 018-1 V1.2.1** March 2006: Electromagnetic compatibility and Radio spectrum Matters (ERM); Transmitting equipment for the Frequency Modulated (FM) sound broadcasting service; Part 1: Technical characteristics and test methods
- **ETSI EN 302 018-2 V1.2.1** March 2006: Electromagnetic compatibility and Radio spectrum Matters (ERM); Transmitting equipment for the Frequency Modulated (FM) sound broadcasting service; Part 2: Harmonized EN under article 3.2 of the R&TTE Directive
- **ETSI ES 201 235-3 V1.3.1** March 2006: Access and Terminals (AT); Specification of Dual-Tone Multi-Frequency (DTMF) Transmitters and Receivers; Part 3: Receivers
- **ETSI ES 201 235-4 V1.3.1** March 2006: Access and Terminals (AT); Specification of Dual-Tone Multi-Frequency (DTMF) Transmitters and Receivers; Part 4: Transmitters and Receivers for use in Terminal Equipment for end-to- end signaling

## JAPAN: MANDATORY PSE SAFETY MARKING REQUIRED FOR MANY DEVICES

Japan's Electrical Appliance and Material Safety Law, implemented on April 1, 2001, changed the mark for Type A electrical appliances (specified electric appliances) from an inverted triangular mark to the PSE diamond label. The safety law also required Type B electrical appliances (non-specified electric appliances), which previously had no marking requirement, to add the PSE circular label. However, there was a grace period established for products labeled with the former law's marks, during which it was possible to sell them. A grace period of five, seven or ten years was set in place for each electrical appliance, starting from the day the law was implemented on April 1, 2001. The bullets below indicate examples of non-specified electronic appliances which will require the PSE circular mark.

- Electrical appliances with a grace period set at five years could be sold until **March 31, 2006**. (e.g., electric refrigerators, electric washing machines, television receivers, electric musical instruments, pedestal lighting fixtures, audio equipment, game machines, etc. 225 items)
- Electric appliances with a grace period set at seven years could be sold until **March 31, 2008**. (e.g., Electric cooking hot plates, electric air conditioners, electric air cleaners, electric power tools, incandescent lamps, etc. 62 items)
- Electric appliances with a grace period set at 10 years could be sold until **March 31, 2011**. (e.g. Wiring devices, conduits, etc. 13 items) click here for link

## US: FCC UPDATES .

**FCC Part 90:** In a Public Notice released on March 7, 2006, the FCC stated its intention to reexamine the Part 90 regulations governing the licensing and use of frequencies in the 904-909.75 and 919.75-928 MHz portions of the 902-928 MHz band. Click here for more detail

**FCC Part 2, Part 15:** The FCC released *ET Docket No. 03-122* on February 16, 2006 which extends the transition period of U-NII devices (unlicensed National Information Infrastructure equipment operating in the 5.250-5.350 GHz band) for 180 days.

- U-NII equipment operating in the 5.25-5.35 GHz band for which applications for certification are filed on or after July 20, 2006 shall comply with the DFS and TPC requirements specified in Section 15.407.
- U-NII equipment operating in the 5.25- 5.35 GHz band that are imported or marketed on or after July 20, 2007 shall comply with the DFS and TPC requirements in Section 15.407.

click this link for more information

# ABOUT US

RTL has provided EMC compliance engineering & testing services since 1988 and has a superior reputation with both the Federal Communications Commission and others in the industry. RTL provides testing services to meet the emissions, immunity, and safety requirements of the European EMC Directive and the EU R&TTE Directive, all FCC rules and regulations, VCCI (Japan), ACMA (Australia), and other international standards.

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